NIFT BDES CAT Question Paper with Solutions

Time Allowed :180 minutes	Maximum Marks :100	Total questions :3

General Instructions

Read the following instructions very carefully and strictly follow them:

1. The examination duration is 180 minutes. Manage your time effectively to attempt all questions within this period.

2. The total marks for this examination are 100.

3. There are 3 questions in the question paper having 3 choices in each question.

1. Select any 3 numbers between 0-9 in Roman/English/Hindi/regional language and create any ONE of the following using the selected numbers. Mention the numbers on top of the answer sheet.

(a) An entertainment zone

(b) A play school

(c) A public park

Solution: Step 1: Choosing Numbers Select any three numbers such as 3, 5, and 8 in a preferred language format (English, Roman, Hindi, or regional language). These numbers will be creatively integrated into the concept chosen.
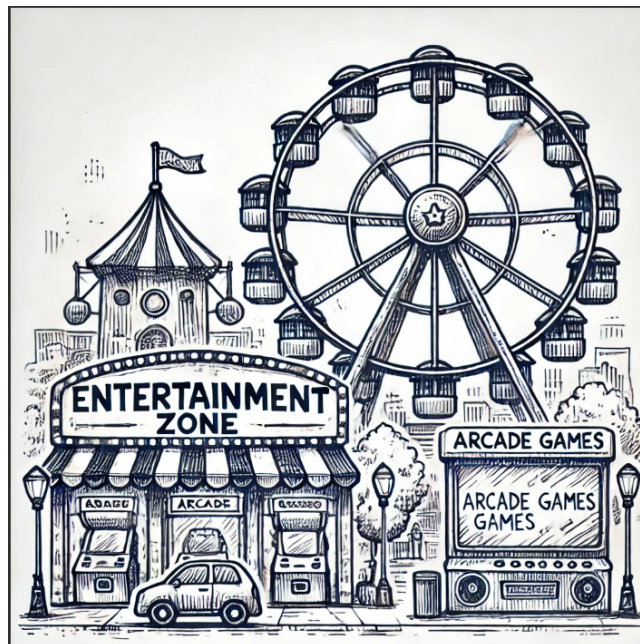
Step 2: Concept Selection We select one of the three options: - Entertainment Zone: A themed amusement space designed using the numbers.

- Play School: A creative play school with zones numbered 3, 5, and 8 for different activities.

- Public Park: A well-organized recreational park using the selected numbers in various elements like benches, pathways, or zones.

Step 3: Visual Representation Create a sketch illustrating the chosen space. Here's a description of each:

- Entertainment Zone: A Ferris wheel with three cabins, a five-sectioned game zone, and an eight-seat carousel.
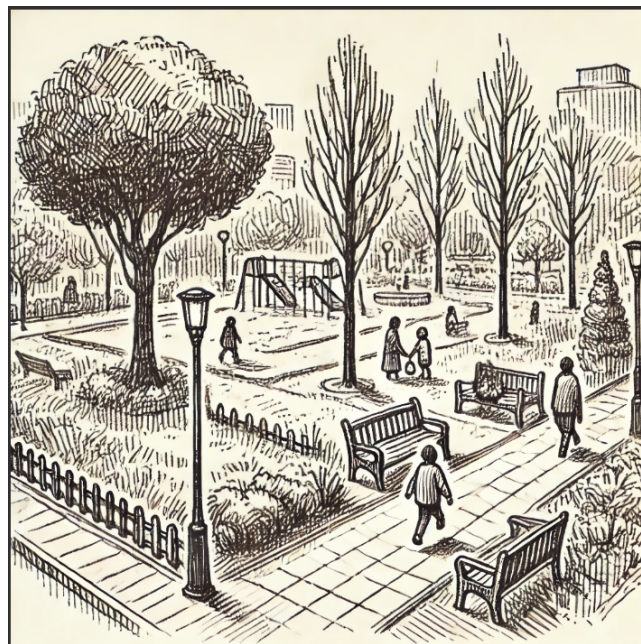

- Play School: Classrooms numbered according to the chosen digits, with a play area

sectioned accordingly.

- Public Park: Walking trails and seating arrangements marked using the selected numbers.

> **Quick Tip**
>
> When designing conceptual spaces, think about functionality and how the selected numbers can be incorporated creatively into the layout. Use numbers to define different areas and ensure a logical flow.

2. Illustrate four creative ways to use any ONE of the following:

(a) A leaking tea cup

(b) A non-repairable wall clock

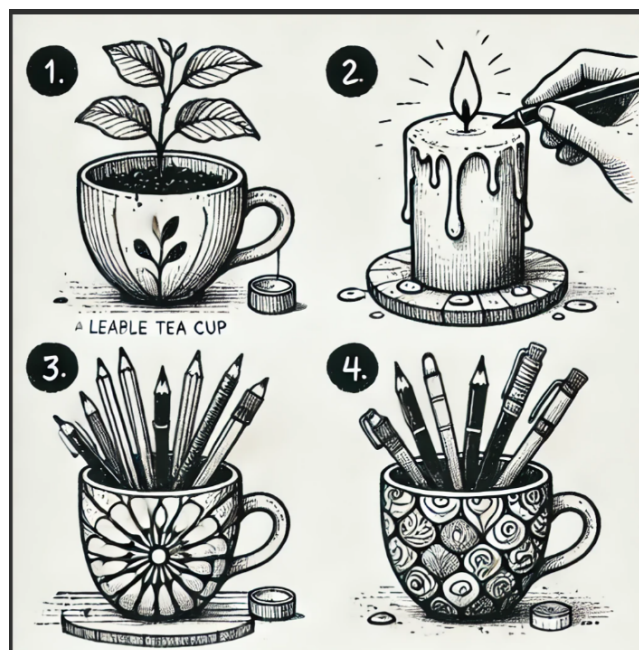**(c) A set of 4 compact discs**

Solution:

(a) A leaking tea cup

Step 1: Understanding the material A tea cup is generally made of ceramic or porcelain, and a leaking cup can still be creatively repurposed.

Step 2: Exploring practical reuses A leaking tea cup may no longer hold liquids, but it has various decorative and practical applications.

Step 3: Four creative ways to reuse a leaking tea cup 1. **Mini Flower Pot:** Fill the cup with soil and plant small flowers or succulents. The leakage provides natural drainage. 2. **Desk Organizer:** Use the cup to store pens, pencils, or makeup brushes. 3. **Candle Holder:** Pour melted wax into the cup to create a decorative candle. 4. **Bird Feeder:** Hang the cup outside and fill it with bird seeds to attract birds.
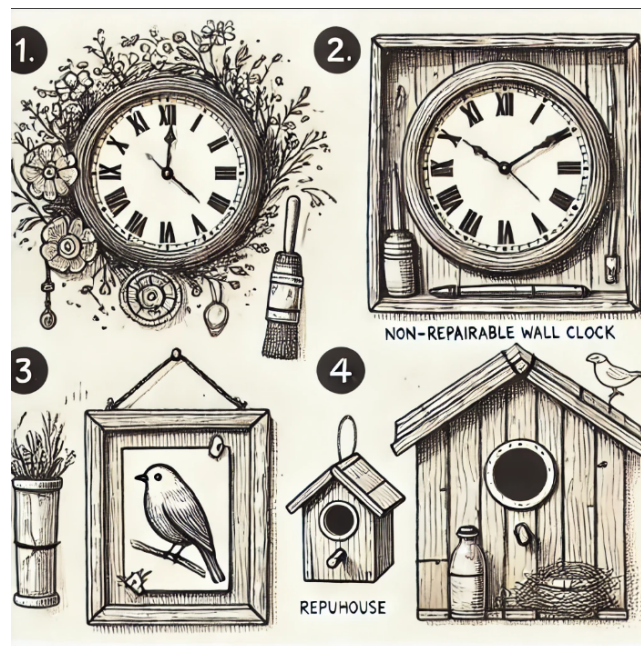
(b) A non-repairable wall clock

Solution: Step 1: Understanding the material A broken wall clock may have decorative potential even if it no longer functions.

Step 2: Exploring practical reuses The circular frame, glass, and hands of the clock can all be utilized for different projects.

Step 3: Four creative ways to reuse a non-repairable wall clock

1. **Photo Frame:** Replace the clock face with a photograph to turn it into a unique wall decoration.

2. **Decorative Mirror:** Remove the hands and clock mechanism, then insert a small mirror in its place.

3. **Wall Art:** Paint over the clock face to create a custom wall art piece.

4. **Hanging Storage:** Use the back of the clock as a small storage compartment for keys or trinkets.

(c) A set of 4 compact discs
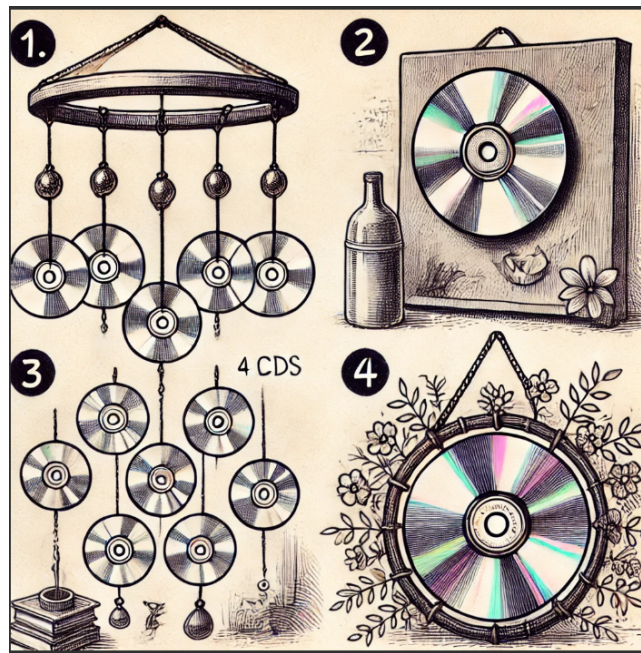
Step 1: Understanding the material

Compact discs (CDs) are circular plastic discs with a reflective surface, making them useful for various creative applications.

Step 2: Exploring practical reuses

Instead of discarding old CDs, they can be repurposed into useful items.

Step 3: Four creative ways to reuse CDs

1. **Wind Chime:** CDs can be strung together using a thread and hung outside to create a wind chime that reflects light beautifully.

2. **Wall Decoration:** CDs can be painted or arranged in an artistic pattern on a wall to add aesthetic appeal.

3. **Coasters:** CDs can be used as drink coasters by covering them with felt or decorative paper.

4. **Reflective Garden Ornaments:** CDs can be placed in gardens to reflect sunlight and deter birds from plants.

Upcycling old CDs is an eco-friendly way to reduce waste. Their smooth surface makes them ideal for DIY craft projects!

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3. Imagine and illustrate any ONE of the following which is artificially developed in the future:

(a) Insect

(b) Bird

(c) Fruit

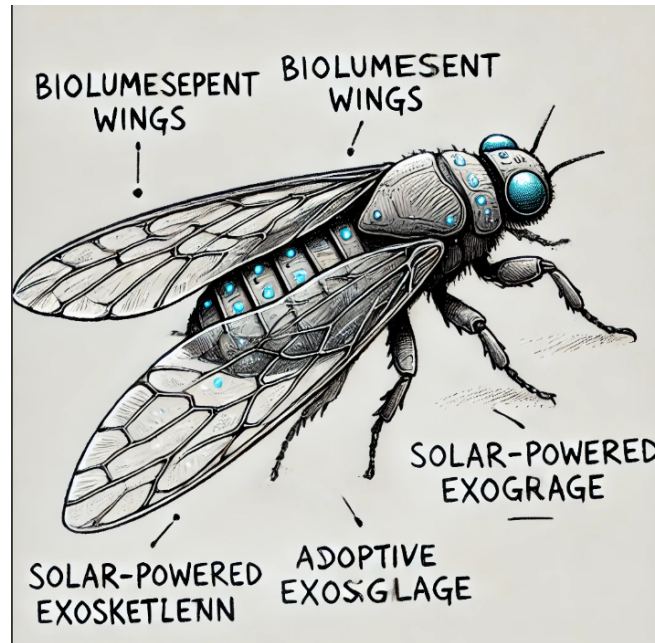Name it suitably and write its 3 unique properties.

Solution:

(a) Futuristic Insect - "SolarFly"

Step 1: Defining the Concept The "SolarFly" is a bioengineered insect designed for pollination and environmental monitoring.

Step 2: Unique Properties

1. **Solar-Powered Flight:** This insect uses ultra-thin solar panels on its wings to generate energy for movement.

2. **AI-Based Pollination:** Equipped with sensors, it detects pollen levels and assists in pollination in areas where natural pollinators are declining.

3. **Air Quality Monitoring:** It collects air quality data and transmits it in real-time to environmental monitoring centers.
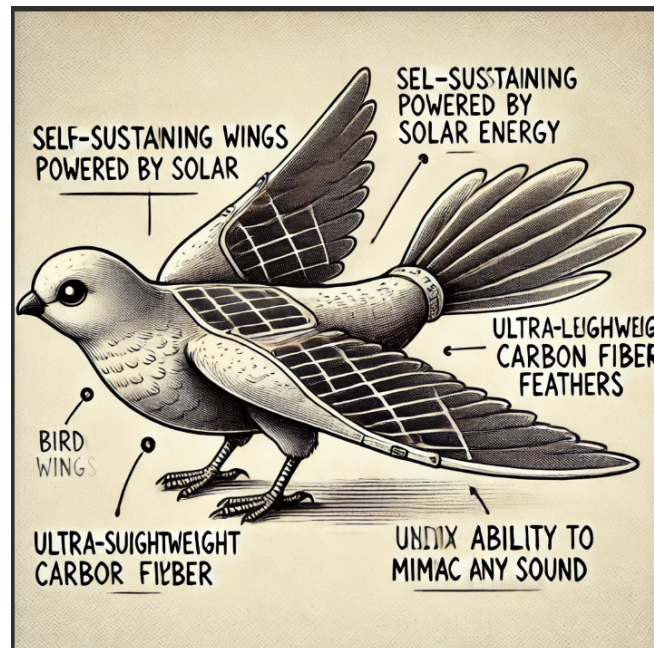

> **Quick Tip**
>
> Artificially developed insects can help address environmental challenges such as pollination decline and air pollution monitoring.

(b) Futuristic Bird - "SkyGuard"

Solution: Step 1: Defining the Concept The "SkyGuard" is an advanced robotic bird designed for security and surveillance purposes.

Step 2: Unique Properties

1. **Autonomous Navigation:** Uses AI and GPS to patrol designated areas without human intervention.

2. **Real-Time Surveillance:** Equipped with high-resolution cameras and night vision for 24/7 monitoring.

3. **Emergency Alert System:** Sends alerts to authorities if it detects suspicious activities.
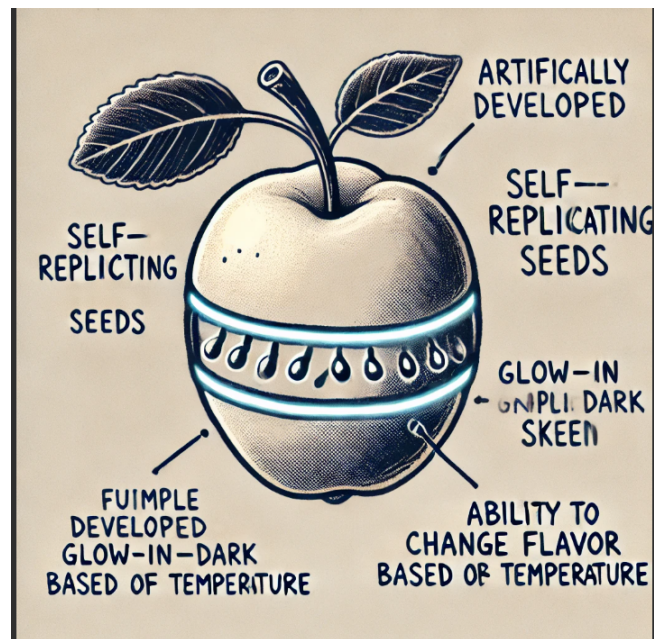
(c) Futuristic Fruit - "NutriGlow"

Step 1: Defining the Concept

"NutriGlow" is a genetically engineered fruit designed to provide essential vitamins and act as a sustainable food source.

Step 2: Unique Properties 1. **Self-Glowing Peel:** Emits a soft glow in the dark, indicating ripeness.

2. **Multi-Vitamin Composition:** Contains essential vitamins and minerals in high concentrations for better nutrition.

3. **Climate Resilient:** Can grow in extreme temperatures and drought conditions.

> **Quick Tip**
>
> Future fruits could address global food security challenges by being more nutritious and climate-resistant.